

Annual Report 1978

AR23

Lornex
Mining Corporation Ltd.

Lornex Mining Corporation Ltd.

Officers

E. H. Lorntzen, *Honorary Chairman*
R. D. Armstrong, *Chairman and Chief Executive Officer*
G. R. Albino, *President and Chief Operating Officer*
L. H. Hunter, *Vice-President, General Manager*
J. Van Netten, *Treasurer*
C. W. M. Burge, *Secretary*

Directors

G. R. Albino, Mississauga, Ontario
R. D. Armstrong, Don Mills, Ontario
A. Fujisaki, Tokyo, Japan
R. E. Hallbauer, Vancouver
N. B. Ivory, Montreal
N. B. Keevil, Jr., Vancouver
D. S. R. Leighton, Banff, Alberta
E. H. Lorntzen, Vancouver
A. F. Lowell, Islington, Ontario
H. A. Pakrul, Mississauga, Ontario
J. Herbert Smith, Toronto
J. Van Netten, Willowdale, Ontario
R. W. Wright, CBE, London, England

Head Office

580 Granville St., Vancouver

Mine Office

P.O. Box 1500, Logan Lake

Auditors

Coopers & Lybrand, Vancouver

Registrar and Transfer Agent

National Trust Company, Limited, Vancouver

Shares Listed

Vancouver Stock Exchange

The Annual General Meeting

11:00 a.m., Thursday, April 19, 1979
Shuswap Lake Room,
The Four Seasons Hotel,
791 West Georgia Street,
Vancouver, British Columbia.

Directors' Report to the Shareholders

Net earnings for the year 1978 were \$14.4 million (\$1.74 per common share) compared to \$7.8 million (\$0.94 per common share) in 1977. A dividend of \$1.7 million (\$0.20 per common share) was paid on November 29, 1978. This is the first dividend that Lornex has paid.

The increase in net earnings in 1978 compared with 1977 was largely due to higher prices for copper and molybdenum; most of the increase in the copper price was attributable to a decline in the value of Canadian currency. The effect of the higher price for copper was modified somewhat by slightly lower copper production and higher smelting and refining charges. Operating costs were maintained at almost the same level as in 1977.

Comparative operating data for the years 1978 and 1977 is as follows:

	1978	1977
Tons of ore milled (thousands)	17,557	17,065
Average tons milled per operating day	48,100	46,753
Average millhead grade		
– copper	0.446%	0.481%
– molybdenum	0.016%	0.015%
Average mill recovery		
– copper	89.5%	88.9%
– molybdenum	71.6%	72.2%
Pounds of payable metal in concentrate produced (thousands)		
– copper	135,422	141,111
– molybdenum	3,985	3,795
Pounds of payable metal in concentrate delivered (thousands)		
– copper	134,621	153,792
– molybdenum	4,110	4,071

The tonnage of ore milled increased slightly in 1978 and, although mill recovery was higher production of copper in concentrate decreased because the millhead grade was lower. Production of molybdenum in concentrate was slightly higher. The variations in millhead grades and recovery rates are regarded as normal.

The gross revenue price per payable pound of copper averaged Canadian 73 cents in 1978 as compared to Canadian 60 cents in the previous year and molybdenum prices were also higher in 1978. As a result

of these increases net revenue from mine production increased to \$88.1 million in 1978 from \$75.4 million in 1977.

As a result of a continuing cost control program, total operating costs were maintained in 1978 at about the same level as in 1977; the average cost per ton of ore milled was reduced to \$2.30 per ton from \$2.33 per ton in 1977. The total quantity of ore and waste material handled in mining operations was about 54 million tons in both years but more ore was available for processing in 1978 because the ratio of waste material to ore mined was 2.05 to 1 in 1978 compared to 2.17 to 1 in the previous year. The average employment level was 747 in 1978, slightly lower than the 1977 average of 767.

Net capital expenditures in 1978 were \$4.4 million and it is expected that such expenditures will be somewhat higher in 1979. Capital expenditures in 1978 related mainly to furtherance of work on projects begun in prior years; no major new capital projects were initiated during the year.

As reported last year the Corporation refinanced its remaining unpaid capital debt in 1976 in the course of which new bank loans in the amount of U.S. \$70 million were arranged. By the end of 1978 these bank loans had been reduced to U.S. \$25 million.

As reported in the interim report for the nine months ended September 30, 1978 a collective agreement was reached between the Corporation and its unionized production, maintenance, office and technical employees at mid-year. This agreement is effective for a two-year period and replaces the agreements which expired on June 30, 1978.

In the context of its first dividend payment it is considered appropriate to review the history of the development and operation of Lornex:

- Following preliminary work in previous years intensive investigation of the Lornex copper-molybdenum deposit in the Highland Valley of British Columbia was undertaken in 1966 and culminated in the completion of a feasibility study in 1968 at a cost of \$6.8 million. The investigation comprised surface drilling, shaft sinking, underground bulk sampling, horizontal underground drilling, surface bulk sampling, metallurgical analyses, construction and operation of a pilot mill, preliminary engineering studies and computer analyses of alternative open pit mining plans.

The new tailings dam for Lornex copper mine in the Highland Valley of British Columbia, at the stage shown, has cost approximately \$15 million to the end of 1978.

- Marketing and financing arrangements were completed during 1969 subject to certain approvals that were required. Construction work began immediately following approval of the financing and related agreements in August, 1970.
- The capital cost when the mine and mill were declared to be in commercial production on October 1, 1972 was \$144.0 million. At this point the financial structure of the Corporation was:

	(millions)
Loans from a consortium of Canadian banks	\$ 60.0
Loans from a consortium of Japanese trading companies	26.8
Income debentures including interest accrued thereon	50.0
Housing loans	0.7
	<hr/>
	137.5
	<hr/>
Shareholders' equity	11.0
	<hr/>
	\$ 148.5

- The design average milling rate of 38,000 tons of ore per day was achieved in 1973, the first full year of operation. Since 1976 the milling rate has averaged approximately 47,000 tons of ore per day.
- Grades of ore mined and recovery of metals have been consistent with the 1968 feasibility study.

Over the six and one-quarter years from October 1, 1972 through December 31, 1978 Lornex has:

- Removed just over 350 million tons of material from its open pit of which 100 million tons was ore that was transported to the mill for processing and from which Lornex recovered:
 - (i) 780 million payable pounds of copper in concentrate together with minor quantities of silver and gold; and
 - (ii) 23 million payable pounds of molybdenum in concentrate.

During this first six and one-quarter year production period the contributions that Lornex has made to the Canadian economy include:

- The generation of net mine revenue of \$474 million which is the Canadian equivalent of the United States funds derived from concentrate production; this has had a major beneficial effect on Canada's balance of payments during this period.

- Payment of \$234 million in operating costs. Of this amount \$70 million represented wage and salary payments to people employed at the mine in addition to which substantial employee benefit payments were made. These payments can reasonably be considered to have had an impact on the Canadian economy equal to several times this amount.
- Additional capital expenditures of \$50 million since the start of production. A multiplier effect is applicable to these expenditures as well.
- The development of an attractive modern town at Logan Lake near the minesite and the establishment of programs that have made home ownership possible for a large number of its employees. Building lots at Logan Lake have been made available to others at cost for housing and for private commercial activities.

Key elements in Lornex's financial performance over this period have been:

- Net earnings were \$92 million after provision for income and mineral resource taxes totalling \$62 million.
- Repayment of capital debt and interest paid thereon totalled \$176 million.

Through risk taking, initiative and technical and entrepreneurial skill the low grade Lornex mineral deposit has been developed into a world-scale operation in the course of which a most substantial contribution has been made to the Canadian economy. It is noteworthy that Lornex can reasonably be expected to continue to make contributions on a commensurate scale into the next century.

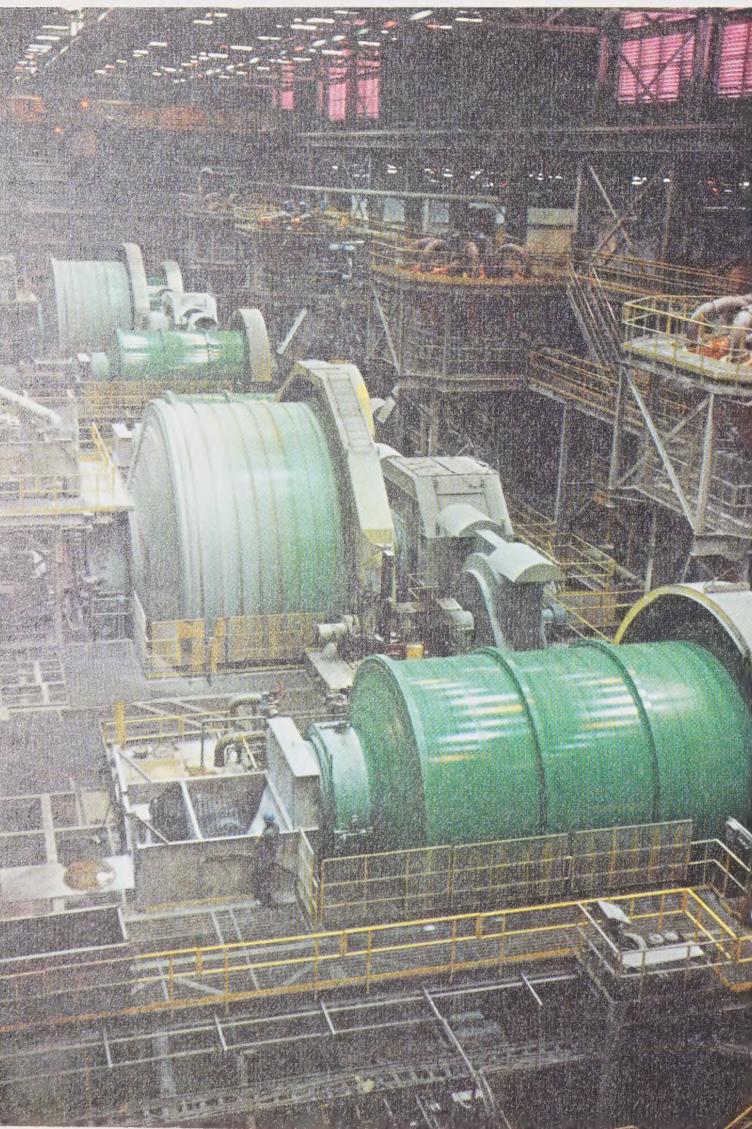
Lornex has been a private sector achievement; no governmental subsidies or loans have been involved. Despite the major benefits that so clearly flow to Canadians from a project of this type there are no established systems whereby financial support or other incentives are made available to develop Canadian mines. However, through one of its agencies the federal government is utilizing the resources of Canadian taxpayers to provide financial support for the development of competitive mines in foreign countries. It is suggested that this is a gross misuse of Canadian resources.

Immensity of the Lornex open pit operation is evident in this photo. In foreground are primary crushing plant and service buildings.



Mr. L. H. Hunter was appointed Vice-President, General Manager on February 27, 1979. Mr. Hunter joined Lornex as General Mine Superintendent in April, 1973, was subsequently appointed Operations Manager in January, 1977 and became Mine Manager in May, 1977. Mr. Hunter's appointment as Vice-President was made in recognition of his effective contribution to Lornex's successful operation; it is intended that he will be elected to the Board of Directors at the Annual General and Extraordinary General Meeting on April 19, 1979.

Grinding circuit in the Lornex processing plant which has had a milling rate averaging 47,000 tons of ore per day since 1976. Design rate was 38,000 tons.



Mr. J. Herbert Smith and Mr. R. W. Wright have been involved in Lornex's affairs for a number of years and each has made a noteworthy contribution to the Corporation's growth and progress. In order that they may relinquish some of their responsibilities Messrs. Smith and Wright will not present themselves for re-election at the forthcoming Annual General Meeting. It is intended that Mr. J. G. Edison, Q.C., who is Counsel to Aird and Berlis, Barristers and Solicitors, and a Director of Rio Algom Limited, be elected to the Board at the Meeting.

Mr. E. H. Lorntzen has reached retirement age under the Corporation's policy and accordingly will not present himself for re-election as a Director. Mr. Lorntzen was the discoverer of the copper-molybdenum deposit that became the Lornex mine and was the founder and first chief executive officer of the Corporation. After relinquishing this post he continued to serve as a Director and was appointed Honorary Chairman. It is intended that Mr. Lorntzen will be appointed an Honorary Director to accord appropriate recognition to the role he has played in the development of the Lornex project.

During 1978 control of The Yukon Consolidated Gold Corporation Ltd. which holds approximately 20% of the Lornex shares was acquired by Teck Corporation. Under the Construction and Management Participation Agreement dated as of December 1969, and more fully described in the Information Circular provided to shareholders as a part of the Notice of Annual and Extraordinary General Meeting held on March 31, 1970, Yukon is entitled to have up to three nominees on the Board. Pursuant to the change in control of Yukon, Messrs. R. A. Hammond-Chambers and I. F. Rushbrook resigned as directors and were replaced by Dr. N. B. Keevil, Jr. and Mr. R. E. Hallbauer. Mr. N. B. Ivory will not present himself for re-election as a Director and Mr. D. L. Hiebert will stand for election as a Director in his stead.

The Corporation's 1978 operations were conducted efficiently and successfully. The Directors wish to record their appreciation of the contribution that has been made by the many individuals who made this possible.

On behalf of the Board

R. D. ARMSTRONG,
Chairman and
Chief Executive Officer

Vancouver, B.C.
February 27, 1979

G. R. ALBINO,
President and
Chief Operating Officer

Lornex Mining Corporation Ltd.

(Incorporated under the laws of British Columbia)

Auditors' Report to the Shareholders

We have examined the statement of financial position of Lornex Mining Corporation Ltd. as at December 31, 1978, and the statements of earnings, retained earnings and changes in financial position for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances.

In our opinion, these financial statements present fairly the financial position of the company as at December 31, 1978, and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Vancouver, British Columbia
February 2, 1979

COOPERS & LYBRAND
Chartered Accountants

ACCOUNTING POLICIES

The principal accounting policies followed by Lornex Mining Corporation Ltd. are summarized hereunder:

REVENUE FROM MINE PRODUCTION AND VALUATION OF CONCENTRATES AWAITING SHIPMENT

Production is valued and taken into income as revenue from mine production at estimated realizable metal prices less provision for possible fluctuation in price; concentrates awaiting shipment are also valued on this basis. Adjustments are made to revenue from mine production with respect to concentrate shipments when the actual metal price is known and the final weight and assay adjustments are determined. Estimated smelting, refining and marketing charges are accrued at time of production and these charges are also adjusted with respect to shipments when the final weight and assay adjustments and marketing charges are determined.

At December 31, 1978 inventories of 23.1 million payable lbs. of copper and 0.4 million payable lbs. of molybdenum contained in concentrates awaiting shipment were valued as described above.

CONVERSION OF UNITED STATES CURRENCY

The accounts in United States currency are stated in Canadian dollars on the following basis:

Current assets and current liabilities at year-end exchange rates; all other assets and long term liabilities at rates in effect at time of transactions, and revenues and expenses at actual rates prevailing during the year.

MINE SUPPLIES

Mine supplies are valued at average cost.

DEPRECIATION AND AMORTIZATION

Depreciation is provided on mining equipment on a straight-line basis over the shorter of its physical life or the estimated life of the mine. The cost of plant and equipment, mining properties and preproduction expenditures is amortized on a unit-of-production basis over the estimated life of the mine.

INCOME AND MINERAL RESOURCE TAXES

The Corporation provides for deferred income and mineral resource taxes on all significant timing differences which represent the tax effects of revenue and expense items reported for tax purposes in periods different than for accounting purposes. Investment tax credits claimed for federal income tax purposes are treated as a reduction of the current year's income tax expense. This reduction amounted to \$2.1 million in 1978 (nil in 1977).

Lornex Mining Corporation Ltd.

(Incorporated under the laws of British Columbia)

Statement of Financial Position

December 31, 1978

(Thousands of dollars)

	1978	1977
CURRENT ASSETS:		
Cash and short term deposits	\$ 7,936	\$ 11,216
Accounts and settlements receivable and prepaid expenses (note 4)	8,974	14,257
Concentrates awaiting shipment (note 4)	17,154	13,201
Mine supplies (note 4)	9,882	9,974
Total	43,946	48,648
Less:		
CURRENT LIABILITIES:		
Accounts payable and accrued liabilities	9,054	12,768
Payable to Rio Algom Limited	132	137
Income and mineral resource taxes	7,554	1,904
Long term debt due within one year (note 4)	—	7,630
Total	16,740	22,439
WORKING CAPITAL	27,206	26,209
Plant and equipment, less depreciation (note 2)	105,937	109,381
Mining properties and preproduction expenditures, less amortization (note 3) ...	36,388	37,781
	142,325	147,162
TOTAL ASSETS LESS CURRENT LIABILITIES	169,531	173,371
Deduct:		
Long term debt (note 4)	25,448	48,851
Deferred income and mineral resource taxes	42,141	35,326
	67,589	84,177
EXCESS OF ASSETS OVER LIABILITIES	\$ 101,942	\$ 89,194
OWNERSHIP EVIDENCED BY:		
Capital stock (note 5)		
Authorized —		
9,500,000 common shares, par value of \$1.00 each		
4,500,000 Class A shares, par value of \$1.00 each		
Issued —		
8,266,562 common shares (8,261,162 shares in 1977)	\$ 8,267	\$ 8,261
Premium less discount on shares issued for cash (includes \$41 premium on shares issued under stock option plan in 1978 and \$62 in 1977)	3,300	3,259
Retained earnings	90,375	77,674
Total	\$ 101,942	\$ 89,194

Approved on behalf of the Board:

N. B. IVORY, Director

R. D. ARMSTRONG, Director

Statement of Earnings

Year Ended December 31, 1978

(Thousands of dollars)

REVENUE:	1978	1977
Net revenue from mine production	\$ 88,096	\$ 75,449
Investment and other income	829	1,495
	<u>88,925</u>	<u>76,944</u>
EXPENSES:		
Operating costs	40,425	39,788
Administrative and general expenses	8,603	7,564
Amortization and depreciation	9,264	9,072
	<u>58,292</u>	<u>56,424</u>
Operating profit	30,633	20,520
Interest on long term debt	4,769	5,139
Earnings before taxes	<u>25,864</u>	<u>15,381</u>
Income and mineral resource taxes		
– Current	5,660	250
– Deferred	5,850	7,350
	<u>11,510</u>	<u>7,600</u>
NET EARNINGS FOR THE YEAR	<u>\$ 14,354</u>	<u>\$ 7,781</u>
NET EARNINGS PER SHARE	<u>\$ 1.74</u>	<u>\$ 0.94</u>

Statement of Retained Earnings

Year Ended December 31, 1978

(Thousands of dollars)

	1978	1977
BALANCE, beginning of year	\$ 77,674	\$ 69,893
Add net earnings for the year	<u>14,354</u>	<u>7,781</u>
	<u>92,028</u>	<u>77,674</u>
Deduct dividend on common shares (\$0.20 per share)	<u>1,653</u>	<u>—</u>
BALANCE, end of year	<u>\$ 90,375</u>	<u>\$ 77,674</u>

Statement of Changes in Financial Position

Year Ended December 31, 1978

(Thousands of dollars)

SOURCE OF FUNDS:	1978	1977
Operations		
Net earnings for the year	\$ 14,354	\$ 7,781
Add charges against earnings not involving current outlay of funds:		
Amortization and depreciation	9,264	9,072
Deferred income and mineral resource taxes	5,850	7,350
Total funds from operations	29,468	24,203
Prepaid royalties recovered	965	—
Housing loans (net)	(26)	225
Issue of common shares under stock option plan	47	70
	30,454	24,498
DISPOSITION OF FUNDS:		
Expenditures on plant and equipment (net)	4,427	18,584
Recoverable royalties	—	559
Dividend paid	1,653	—
Repayment of bank loans (1978 — U.S. \$24,000; 1977 — U.S. \$14,000)	23,377	13,637
	29,457	32,780
INCREASE (DECREASE) IN WORKING CAPITAL	997	(8,282)
WORKING CAPITAL, beginning of year	26,209	34,491
WORKING CAPITAL, end of year	\$ 27,206	\$ 26,209

Notes to the Financial Statements

December 31, 1978

1. ACCOUNTING POLICIES

The information on page 6 presents a summary of certain accounting policies and is an integral part of these financial statements.

2. PLANT AND EQUIPMENT

	1978	1977
Plant and equipment at cost	<u>\$ 145,339,718</u>	\$ 140,930,598
Less accumulated depreciation	<u>39,403,236</u>	31,549,765
	<u><u>\$ 105,936,482</u></u>	<u><u>\$ 109,380,833</u></u>

3. MINING PROPERTIES AND PREPRODUCTION EXPENDITURES

	1978	1977
Mining properties at cost	<u>\$ 1,233,179</u>	\$ 1,233,179
Less accumulated amortization	<u>251,698</u>	214,829
	<u><u>981,481</u></u>	<u><u>1,018,350</u></u>
Preproduction expenditures at cost	<u>46,191,501</u>	46,213,277
Less accumulated amortization	<u>10,784,616</u>	9,450,329
	<u><u>35,406,885</u></u>	<u><u>36,762,948</u></u>
	<u><u>\$ 36,388,366</u></u>	<u><u>\$ 37,781,298</u></u>

4. LONG TERM DEBT

	1978	1977
Bank loans due as stated hereunder	<u>\$ 24,350,982</u>	\$ 54,546,200
Less portion included in current liabilities	<u>—</u>	* 6,818,275
Long term portion		
(1978 — U.S. \$25,000,000; 1977 — U.S. \$49,000,000)	<u>24,350,982</u>	47,727,925
Housing loans	<u>1,097,475</u>	1,123,181
	<u><u>\$ 25,448,457</u></u>	<u><u>\$ 48,851,106</u></u>
 *Current portion as above	 <u>—</u>	 \$ 6,818,275
Add foreign exchange differential	<u>—</u>	<u>811,725</u>
Total as shown on statement of financial position	<u><u>—</u></u>	<u><u>\$ 7,630,000</u></u>

Repayment of the bank loans is secured by general assignments of the accounts and settlements receivable and by registered assignments under Section 88 of the Bank Act of all concentrates awaiting shipment and mine supplies. The interest rate on these loans varies with the base rate for United States dollar loans made in Canada; the December 31, 1978 rate payable was 12 $\frac{3}{4}$ % per annum.

Under the terms of the bank loan agreement the Corporation is required to repay, on February 15 and August 15 in each of the years 1979 to 1981 inclusive, a principal amount equal to the lesser of 75% of the available cash flow as defined or U.S. \$7,000,000; any balance of the loans is due August 15, 1981. The 1978 instalments were paid in full and, in addition, prepayments of U.S. \$17,000,000 were made in 1978.

The balance outstanding of U.S. \$25,000,000 is the equivalent of Canadian \$29,500,000 as at December 31, 1978; however, in the normal course of events this debt will be repaid out of U.S. funds derived from future sales of copper and molybdenum concentrates.

5. CAPITAL STOCK

During the year 5,400 common shares were issued for \$46,130 cash under a Stock Option Plan.

At December 31, 1978, 32,200 common shares were reserved for issue under a Stock Option Plan. Options may be granted to employees of the Corporation or of Rio Algom Limited. Outstanding options have been granted to purchase 2,200 common shares at prices varying from \$7.20 to \$8.65 per share; these options expire on varying dates from April 16, 1979 to April 22, 1980.

Under the terms of the bank loan agreement dividends would be restricted if specified cumulative loan repayments have not been made or if the Corporation's working capital is not maintained at a minimum of \$20,000,000; to December 31, 1978 these specified loan repayments, totalling U.S. \$28,000,000, have been made.

6. COMMITMENTS AND CONTINGENT LIABILITIES

- (a) Rio Algom has agreed to supervise and manage the business of the Corporation until December 1, 1984. The 1978 management fee was \$546,000 and the fee for future years is to be escalated in accordance with a formula based on published government indices and subject to a maximum based on a percentage of the earnings before taxes.
- (b) The Corporation has a contingent liability to buy back houses and mobile home lots at the Logan Lake townsite for \$4,808,639 until December 31, 1982; the cost of the buyback declines by 5% per annum thereafter.
- (c) Estimated total cost to complete approved capital expenditures at December 31, 1978 was approximately \$4,063,000 of which \$585,000 was committed.

7. REMUNERATION OF DIRECTORS AND SENIOR OFFICERS

The aggregate direct remuneration paid or payable by the Corporation to the Directors and Senior Officers of the Corporation was \$332,419 in respect of the year ended December 31, 1978. In addition amounts, charged to earnings in prior years in respect of discretionary deferred bonus awards, totalling \$13,332 became payable to those individuals during 1978.

Supplementary Information

Five Year Review

Lornex Mining Corporation Ltd.

(Thousands of dollars)

	1978	1977	1976	1975	1974
Net revenue from mine production	\$ 88,096	\$ 75,449	\$ 82,940	\$ 51,043	\$ 85,421
Investment and other income	829	1,495	1,503	842	4,059
	88,925	76,944	84,443	51,885	89,480
Operating costs	40,425	39,788	33,572	25,141	28,247
Administrative and general expense	8,603	7,564	6,913	5,677	6,342
Amortization and depreciation	9,264	9,072	8,002	5,917	7,029
	58,292	56,424	48,487	36,735	41,618
Operating profit	30,633	20,520	35,956	15,150	47,862
Interest expense	4,769	5,139	5,990	6,988	8,671
	25,864	15,381	29,966	8,162	39,191
Income and mineral resource taxes	11,510	7,600	14,063	7,536	16,510
Net earnings	\$ 14,354	\$ 7,781	\$ 15,903	\$ 626	\$ 22,681
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Production Data:					
Tons of ore milled (000's)	17,557	17,065	17,016	12,893	16,445
– per operating day	48,100	46,753	46,877	38,259	45,056
Copper in concentrate (pounds – 000's)	135,422	141,111	145,712	107,160	128,064
Molybdenum in concentrate (pounds – 000's)	3,985	3,795	3,769	3,084	4,038
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Financial Data:					
Earnings per share	\$ 1.74	\$ 0.94	\$ 1.93	\$ 0.08	\$ 2.76
Long term debt (000's)	\$ 25,448	\$ 48,851	\$ 62,263	\$ 66,952	\$ 78,363
Shareholders' equity (000's)	\$ 101,942	\$ 89,194	\$ 81,343	\$ 65,238	\$ 64,538
– per share	\$ 12.33	\$ 10.80	\$ 9.86	\$ 7.93	\$ 7.86
Common shares outstanding (000's)	8,267	8,261	8,253	8,226	8,216
Capital expenditures (000's)	\$ 4,427	\$ 18,584	\$ 17,115	\$ 2,794	\$ 2,878

